

# NIOSH Pocket Guide to Chemical Hazards

<b>Ammonia</b>		CAS 7664-41-7
<b>NH<sub>3</sub></b>		RTECS BO0875000
<b>Synonyms &amp; Trade Names</b> Anhydrous ammonia, Aqua ammonia, Aqueous ammonia [Note: Often used in an aqueous solution.]		<b>DOT ID &amp; Guide</b> 1005 125 (anhydrous) 2672 154 (10-35% solution) 2073 125 (>35-50% solution) 1005 125 (>50% solution)
<b>Exposure Limits</b>	NIOSH REL: TWA 25 ppm (18 mg/m <sup>3</sup> ) ST 35 ppm (27 mg/m <sup>3</sup> )	
	OSHA PEL : TWA 50 ppm (35 mg/m <sup>3</sup> )	
IDLH 300 ppm See: <a href="#">7664417.html</a>		Conversion 1 ppm = 0.70 mg/m <sup>3</sup>
<b>Physical Description</b> Colorless gas with a pungent, suffocating odor. [Note: Shipped as a liquefied compressed gas. Easily liquefied under pressure.]		
MW: 17.0	BP: -28°F	FRZ: -108°F
VP: 8.5 atm	IP: 10.18 eV	RGasD: 0.60
FI.P: NA (Gas)	UEL: 28%	LEL: 15%
[Note: Although NH <sub>3</sub> does not meet the DOT definition of a Flammable Gas (for labeling purposes), it should be treated as one.]		
<b>Incompatibilities &amp; Reactivities</b> Strong oxidizers, acids, halogens, salts of silver & zinc [Note: Corrosive to copper & galvanized surfaces.]		
<b>Measurement Method</b> Si gel*; Water; Visible spectrophotometry; IV [#6015] [Also #6016] See: <a href="#">NMAM INDEX</a>		
<b>Personal Protection &amp; Sanitation</b> Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated (solution) Remove: When wet or contaminated (solution) Change: N.R. Provide: Eyewash (>10%), Quick drench (>10%)		<b>First Aid</b> Eye: irrigate immediately (solution/liquid) Skin: Water flush immediately (solution/liquid) Breathing: respiratory support Swallow: Medical attention immediately (solution)
<b>Respirator Recommendations NIOSH</b> Up to: 250 ppm: (APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern*/(APF = 10) Any supplied-air respirator* Up to: 300 ppm: (APF = 25) Any supplied-air respirator operated in a continuous-flow mode*/(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern*/(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern/(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern/(APF = 50) Any self-contained breathing apparatus with a full facepiece/(APF = 50) Any supplied-air respirator with a full facepiece §: Emergency or planned entry into unknown concentrations or IDLH conditions. (APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure- demand or other positive-pressure mode/(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus Escape: (APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern/Any appropriate escape-type, self-contained breathing apparatus		
<b>Exposure Routes</b> inhalation ingestion (solution) skin and/or eye contact (solution/liquid)		
<b>Symptoms</b> irritation eyes, nose, throat; dyspnea (breathing difficulty), bronchospasm, chest pain; pulmonary edema; pink frothy sputum; skin burns, vesiculation; liquid: frostbite		
<b>Target Organs</b> Eyes, skin, respiratory system		
See also ICSC CARD: <a href="#">neng0414.html</a> See also MEDICAL TESTS: <a href="#">nmed0013.html</a>		